ABSTRACT OF THE DISCLOSURE

A method and apparatus are presented for automatically generating machine control instructions in a general and flexible manner. The generated instructions can be edited directly or in a high-level graphical interface. Any changes made either locally or by remote users over a network to the generated instructions or their abstract representations will be automatically reflected in both the abstract representations and the generated instructions. This allows the use of a high-level tool for rapid code generation even after modification of previously generated instructions. Furthermore, the execution of the generated code can be traced through and monitored through the same high-level graphical model.